Puccinia mccleanii on *Gladiolus*

Puccinia mccleanii is a microcyclic rust fungus considered of quarantine significance for the U.S. It is known only from southern Africa on *Gladiolus ludwigii* (Iridaceae).

Puccinia mccleanii Doidge, Bothalia 4: 231. 1941.

Spermogonia, aecia and uredinia unknown.

Telia amphigenous, scattered or grouped, rounded to oblong, subepidermal, erumpent, pulverulent, surrounded by ruptured epidermis, between veins, sometimes transverse to veins, up to 0.5 mm long, when grouped covering up to 1 cm of leaf surface, chestnut brown, without paraphyses; **teliospores** oblong-clavate to oblong, sometimes constricted at septum, rounded, truncate, attenuated or oblique-attenuated at apex, lower probasidial cell frequently narrower, cinnamon brown, lighter cinnamon brown at the base of the spore, (35-) 50-60 (-70) × (12.5-) 14-17 (-20) µm, cell wall 1-2 µm thick, apex sometimes thicker 4 (-7) µm; pedicel up to 45 µm long, easily broken, light cinnamon

Host and Distribution: *Gladiolus ludwigii* from South Africa.

Specimen examined: on *Gladiolus ludwigii* Hook f., from South Africa, Natal, Nottingham Road, 20 March 1939, leg. A.P.D. McClean (PREM 30996) III, Holotype.

Puccinia mccleanii is only known from the type specimen and only telia have been described. The only other species of *Puccinia* reported on *Gladiolus* is *P. gladioli* Henn. from Europe and Asia, which is heteroecious (spermogonia and aecia reported on *Valerianella*). Telia of *P. gladioli* are paraphysate, form crusts, and teliospores are shorter and thicker (36-60 × 16-27 µm) than those of *P. mccleanii*. Telia of *P. mccleanii* are aparaphysate and pulverulent, and teliospores are longer and narrower. Three species of *Uromyces* (*U. gladioli*, *U. transversalis* and *U. nyikensis*) are reported on *Gladiolus*; teliospores of these species are not septate. An additional rust on *Gladiolus* is *Uredo gladioli-büttneri*, which lacks of telia.

References:

Doidge, E.M. 1941. South African rust fungi IV. Bothalia 4: 229-236.

Suggested citation: Hernández, J.R.. Systematic Mycology and Microbiology Laboratory, ARS, USDA. 12 May 2005. Invasive Fungi. *Puccinia mccleanii* on *Gladiolus*. Retrieved October 6, 2007, from http://nt.ars-grin.gov/sbmlweb/fungi/index.cfm .

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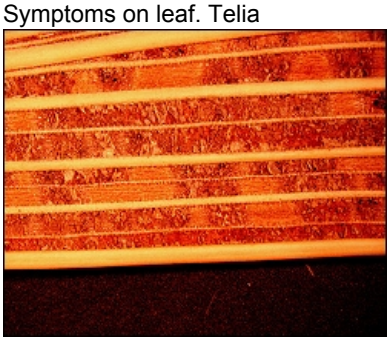

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Teliospores

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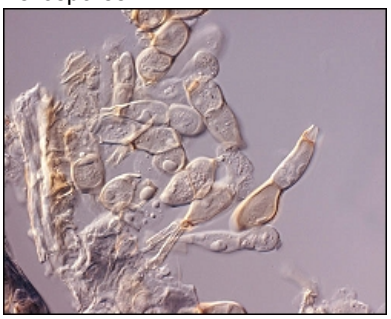

Teliospores

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